

# Interaction in Lectures with Mobile Devices



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Lecturer in Macroeconomics

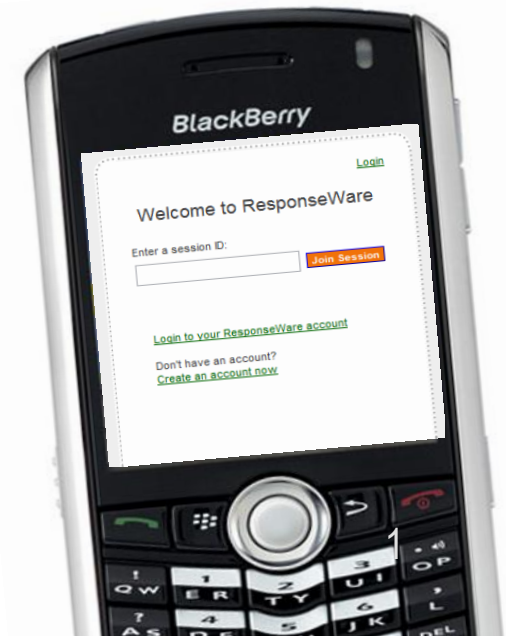


Will Moindrot  
eLearning Technologist

In preparation, use your mobile phone

- visit **[www.rwpoll.com](http://www.rwpoll.com)**
- Session ID: **dee2013** (lower/upper case)
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Or collect a 'clicker' from the front





# Lecture Interaction



Today's talk.....

Background/Project

Live Demonstration

Other Uses of Voting Systems

Technical Demonstration

Student Survey Evidence

Conclusion

*What do we mean by: Interaction Technology ?*

Technology that allows communication between student and lecturer 'in class'. – Classroom Voting Systems.

Specifically technology that allows 'over web' answering of multiple choice style question during lectures.





# Lecture Interaction



*Project: 'Interaction in Lectures with Mobile Devices': 2010-13*

Success of classroom voting systems is well known but how can this technology be used to overcome the problems of teaching in large cohorts?

Aim to test feasibility of using mobile phones/devices instead of traditional handsets.

To further understanding of classroom voting systems to enhance learning in large cohort sessions.

To innovate in the use of voting systems to find other benefits that can increase student satisfaction.

# The problem of large cohorts and traditional handsets



Imagine the problem of distributing this many handsets to 500+ students

A web based solution can reduce the requirement to this....



# Voting technology in at Manchester since 2010



ECON10042 – 1st Year UG  
Macroeconomic Principles –  
approx 600 students

ECON20401 – 2<sup>nd</sup> Year UG  
Macroeconomics IIA – approx  
510 students

- Students now have a tool to test themselves as they learn
- Lecturers can identify areas of weakness as they teach
- Students can feedback to the lecturer – real time recorded
- Increases interest/alertness during longer lectures
- Facilitates other pedagogical enhancements to learning, some of which we have found surprising!



# Live Demonstration of Classroom Voting

In the next slide we will be actually voting:

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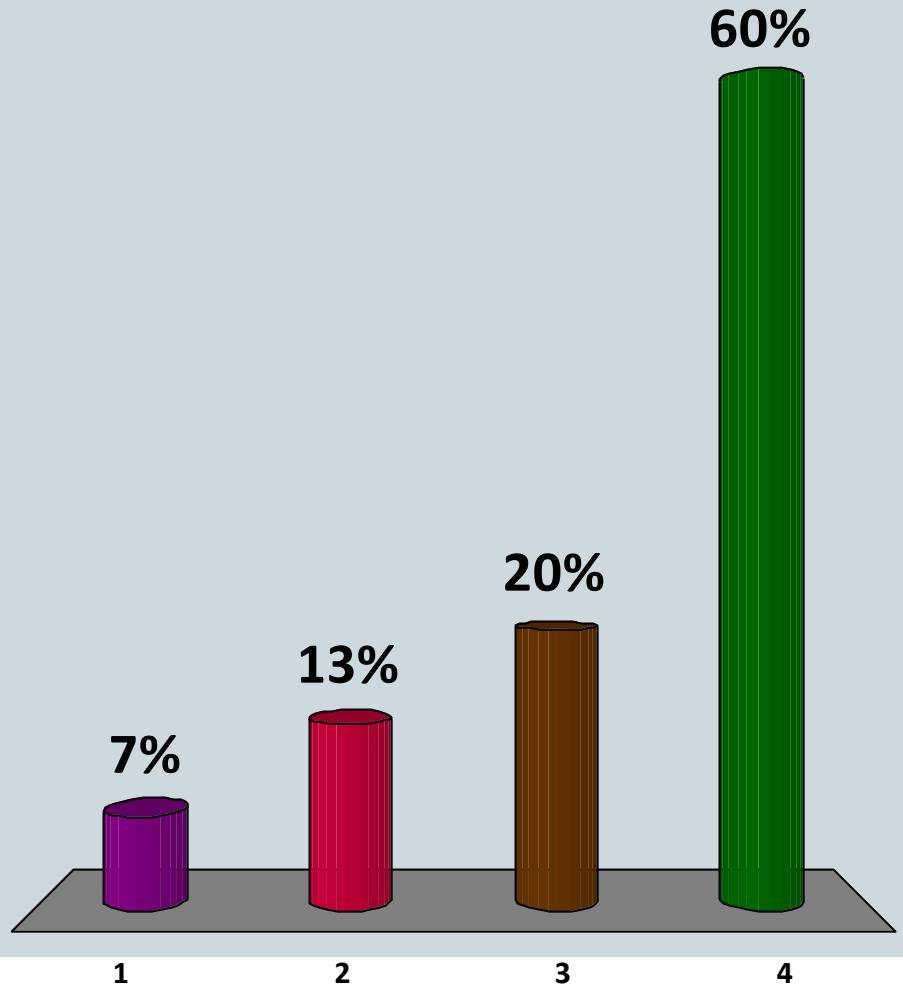
Or collect a 'clicker' from the front

Feel free to leave 'feedback' via your mobile device during any part of this presentation



# Have you used clickers before?

1. I have never used them
2. I have only heard of them
3. Yes, as a participant like this
4. Yes, I've even taught with them

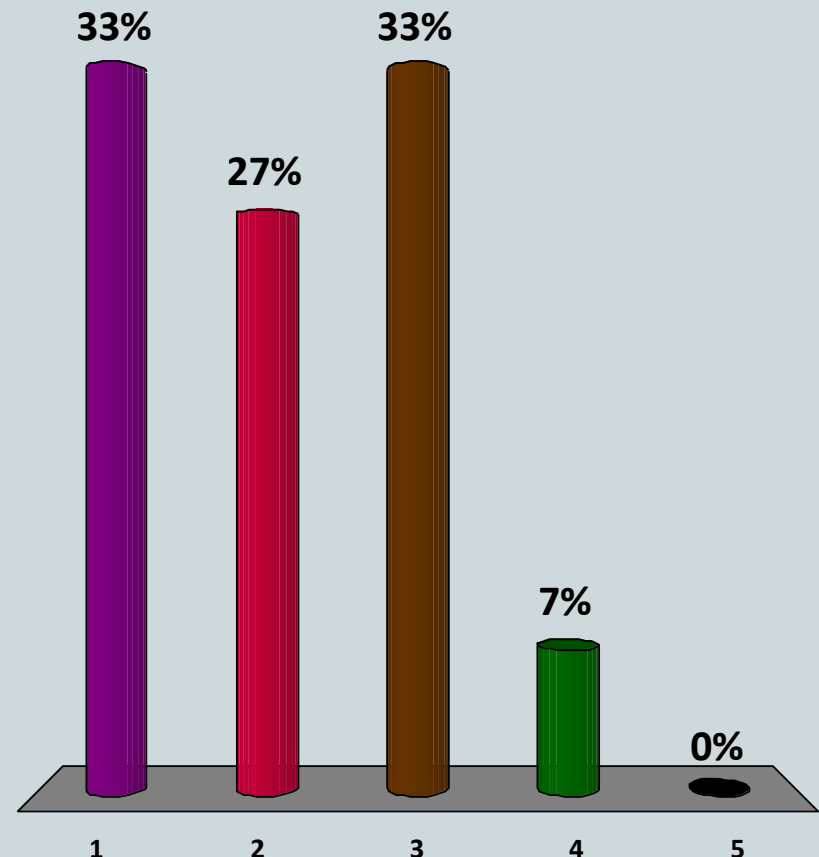




# Which use of this technology do you see being of most value?



1. To break up lecture content.
2. Enable students to monitor their own progress.
3. To gain feedback from your teaching/explanation.
4. To collect data for your teaching/research.
5. Provision of other benefits to students.



# Not just a pretty quiz tool!

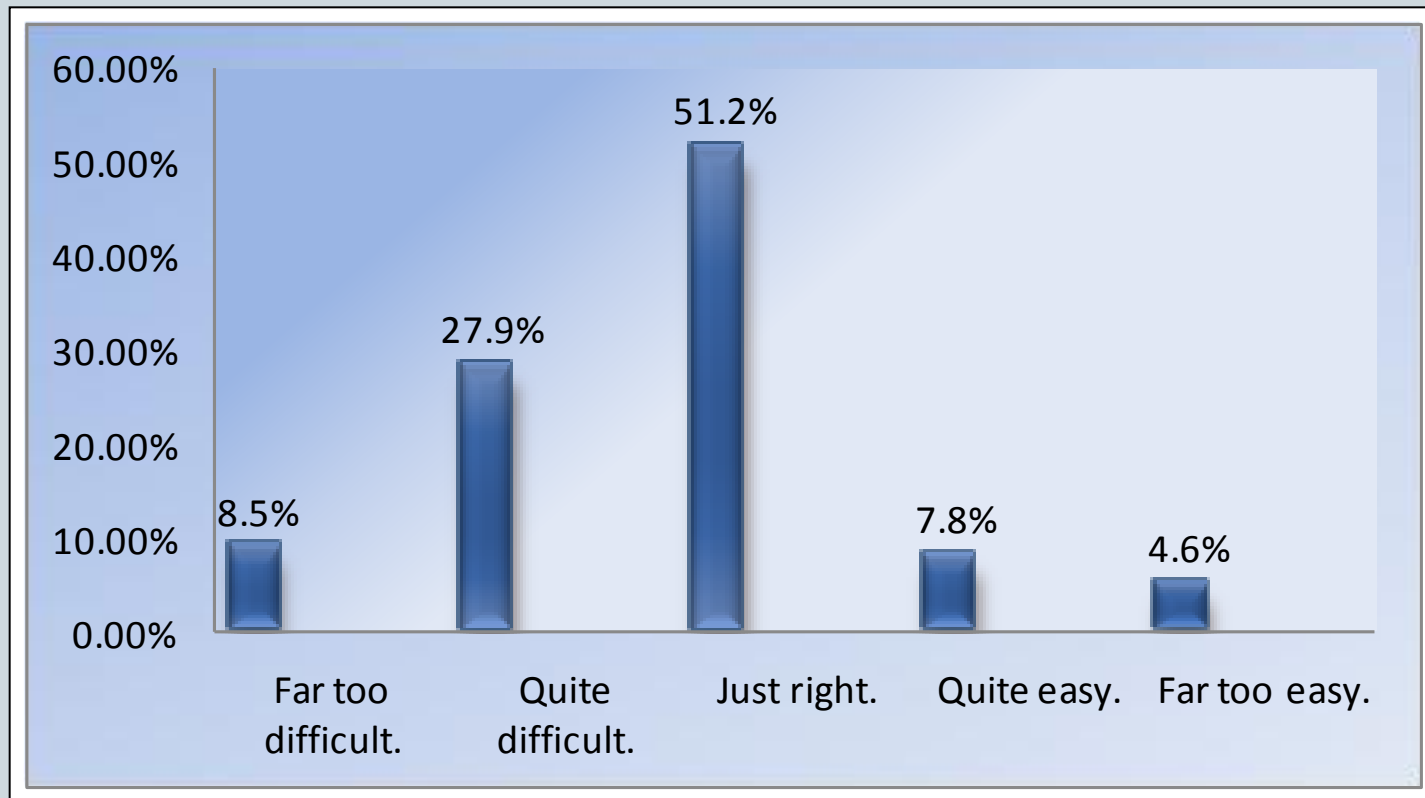
Other ways we have used this classroom voting system.

1. To gauge opinion on the taught material; a barometer.
2. To allow students to provide anonymous feedback during each lecture.
3. Peer interaction: Students revisit question after discussion with peers.

# 1. Student Difficulty Perception

## Course: Macroeconomic Principles (400)

Q: What do you think about the level of difficulty on this course?



## 2. Real time feedback

Turning Says (2:12:12 PM):

Slide 4 Displayed

GUEST\_5367 Says (2:12:13 PM):

We need a midterm test

GUEST\_5440 Says (2:13:37 PM):

no idea middleditch

GUEST\_5337 Says (2:16:17 PM):

Can u explain more about mpw pls? I'm a bit confused

GUEST\_5375 Says (2:16:17 PM):

Could you sing the Countdown Theme tune instead of just counting to three? That would be lovely.

Turning Says (2:17:35 PM):

Slide 5 Displayed

GUEST\_5349 Says (2:18:39 PM):

Get well soon

GUEST\_5293 Says (2:21:23 PM):

So happy you are feeling better xoxox

Francesco Wang Says (2:21:42 PM):

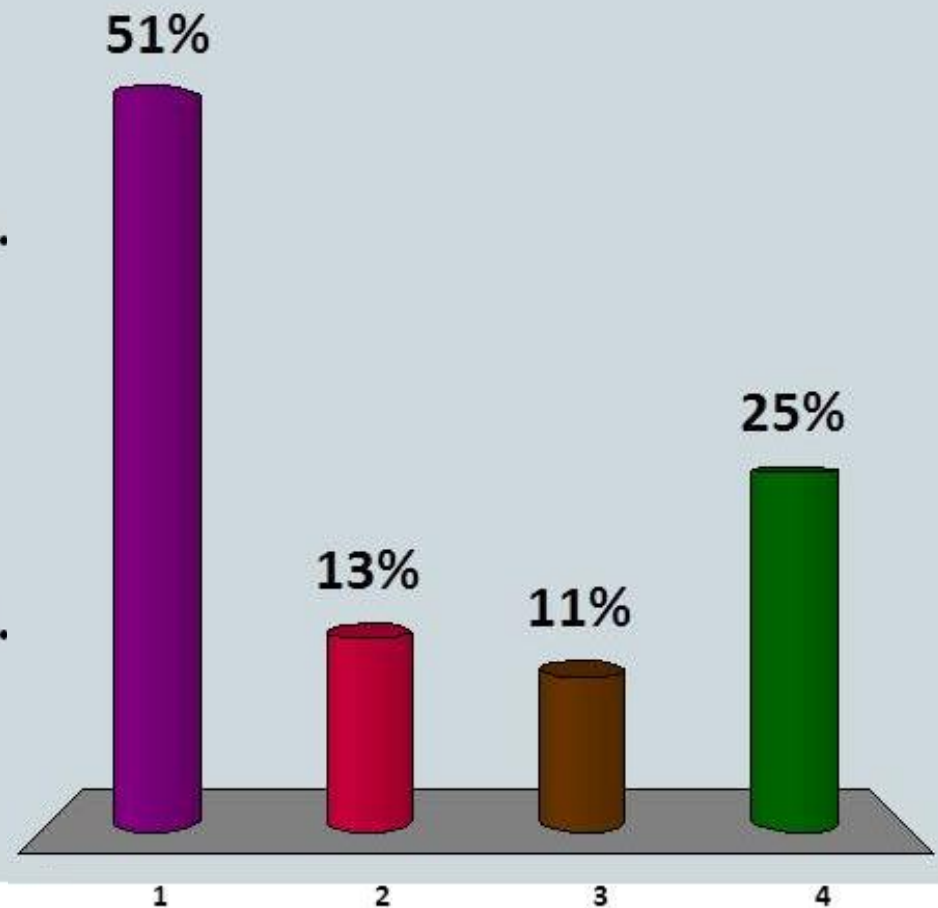
I love this!

GUEST\_5340 Says (2:23:16 PM):

Hey

# In the loanable funds market, how would we represent austerity measures in the UK ?

1. The investment line would shift inwards.
2. The investment line would shift outwards.
3. The savings line would shift inwards.
- ✓ 4. The savings line would shift outwards.



# TurningPoint ResponseWare

- Ease of use through PowerPoint (WYSIWYG)
- Works on any web enabled device (website or app)
- Works in tandem with TurningPoint 'clickers' for an inclusive option
- Allows live anonymous feedback from students
- Results exportable into Excel files for data gathering



[www.shawmode.co.uk](http://www.shawmode.co.uk)

Next slide...

# Task (2 minutes)



Introduce yourself to a neighbouring delegate using the following as an ice breaker:

1. Have a brief chat about ideas for the use of voting technology within teaching
2. Think up a single question that you would ask students first lecture

## End





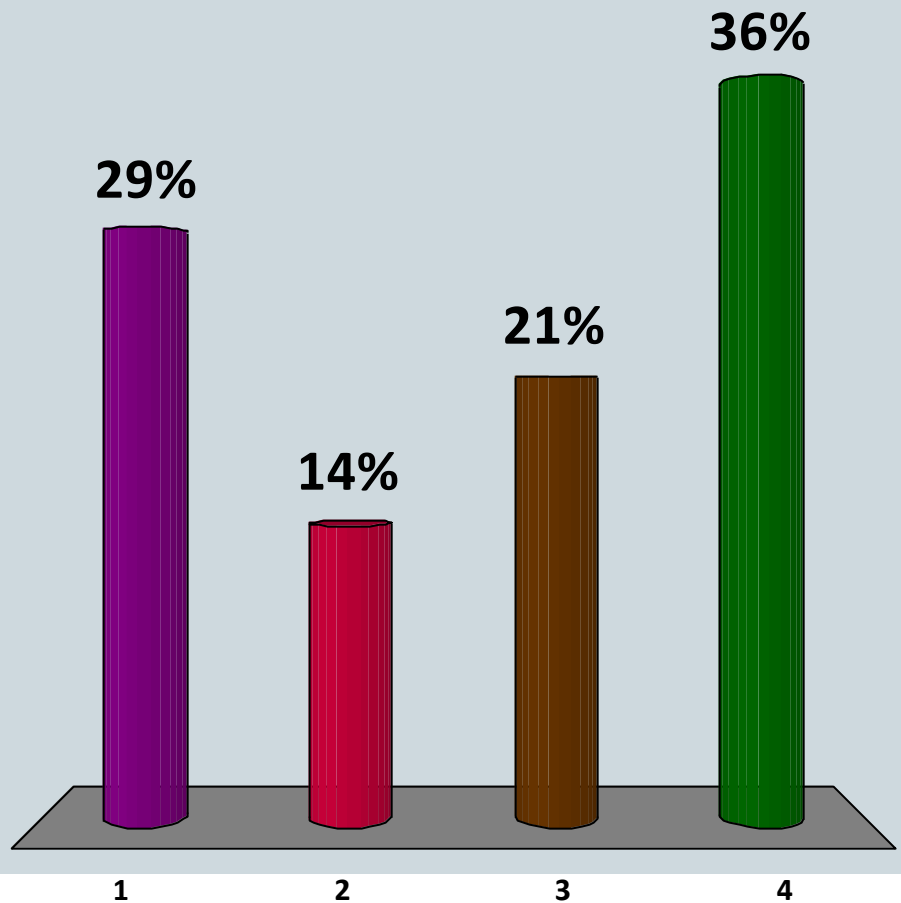
# Technical demonstration



- Now I will put your question into an interactive slide in less than 30 seconds

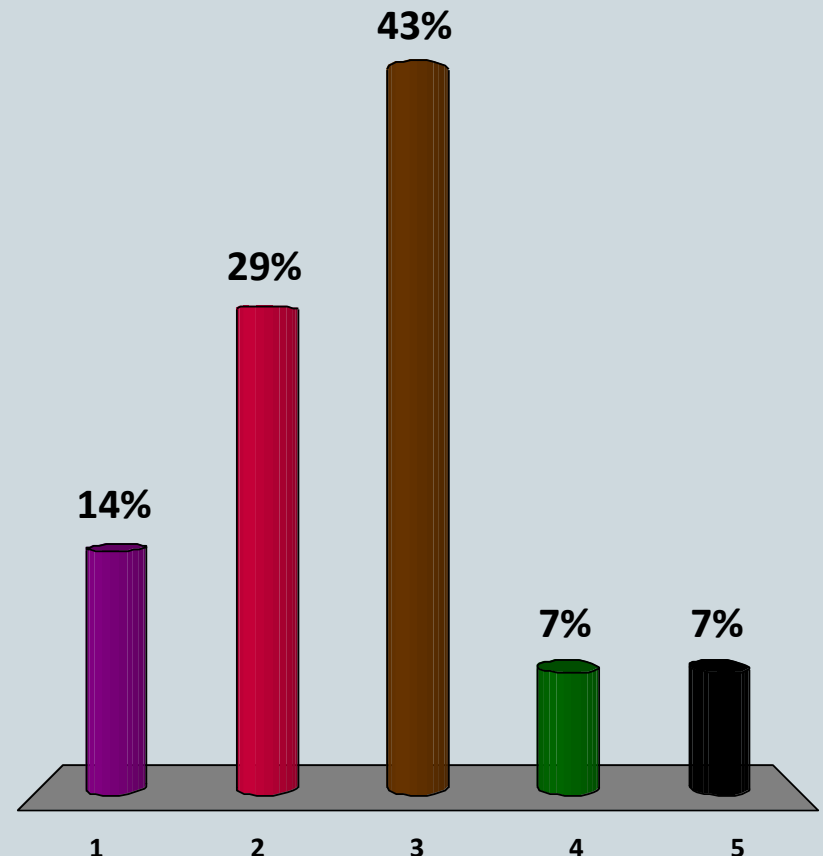
# Which qual do you have?

1. Alevel ec
2. Alevel maths
3. Alevels both
4. neither

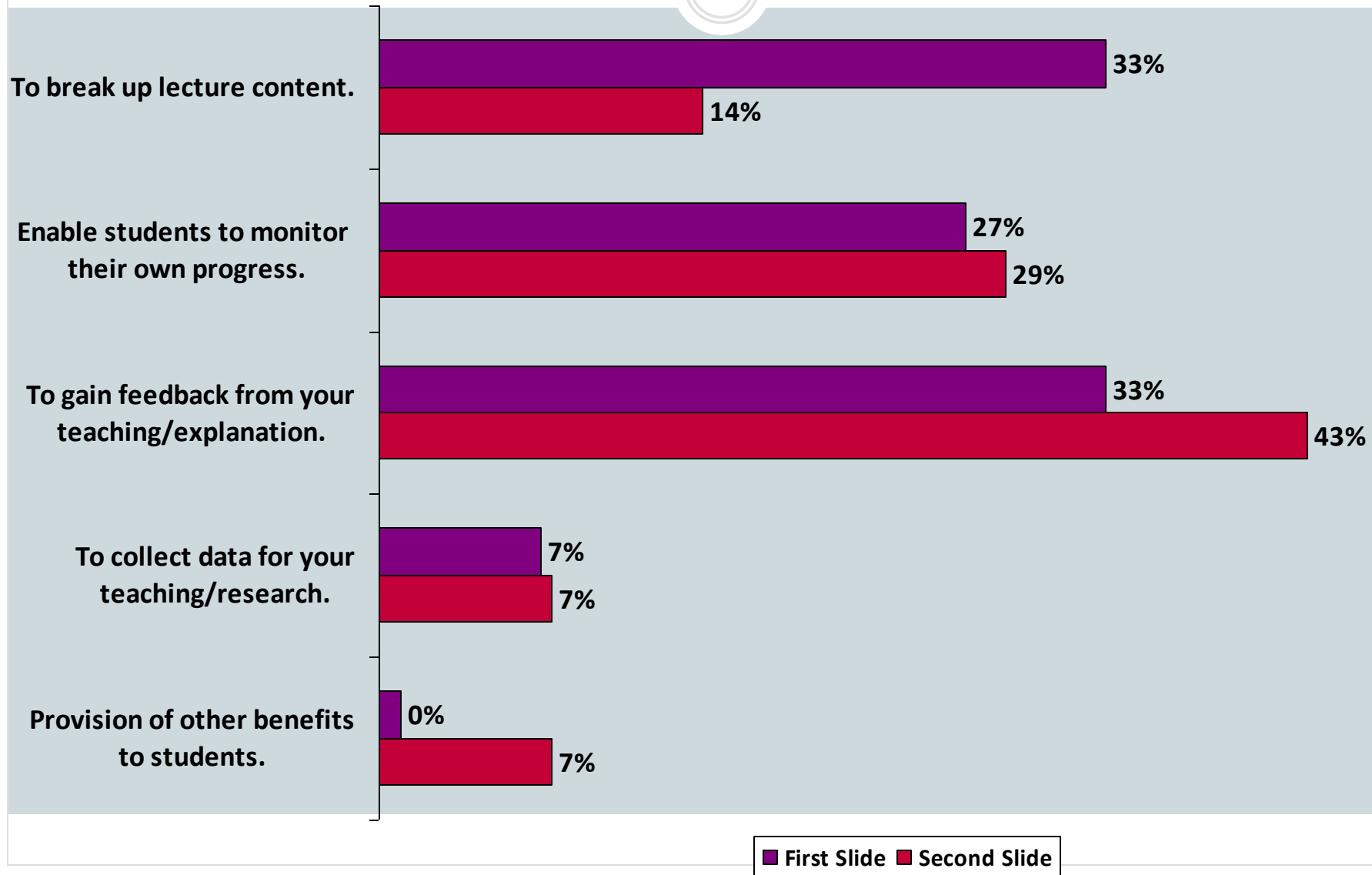


# Which use of this technology do you see being of most value?

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# Which use of this technology do you see being of most value?



# What do the students think?



‘The interaction kept us alert during the whole two hours. It was fun, and a nice opportunity to meet new people through the discussion part.’

It's rare to have interactive lectures and I felt I was learning & also enjoying it. Arguably most enjoyable ECON10042 lecture to date. Great idea and should be used more.

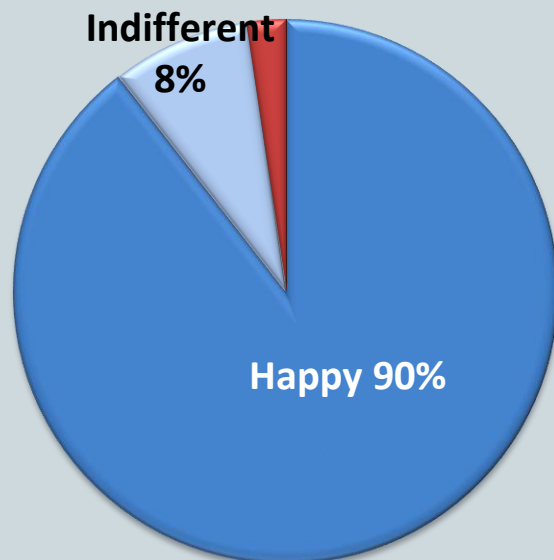
Brilliant idea. We often turn to our phones when we lose concentration - interest or when the lecture becomes incomprehensible so I think including our devices will keep us alert and participating, as well as checking if our understanding is correct.

‘Not only does it enable students to INTERACT during the lecture, but the method of letting students vote twice gives students an idea of what the TYPICAL ERRORS/COMMON MISTAKES are and how these questions need to be tackled in practice.’

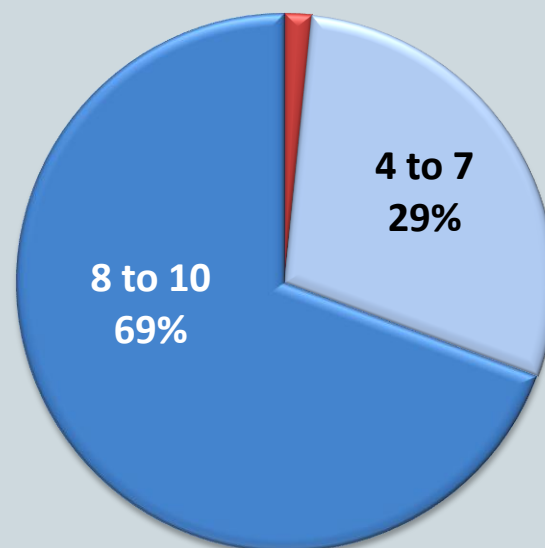
# Survey Evidence I

(collected from ECON10042 2011/12 (62/263) )

Describe how you feel about using a voting system in class.



How strongly (1-10) do you believe use of TP enhanced your satisfaction of the course?

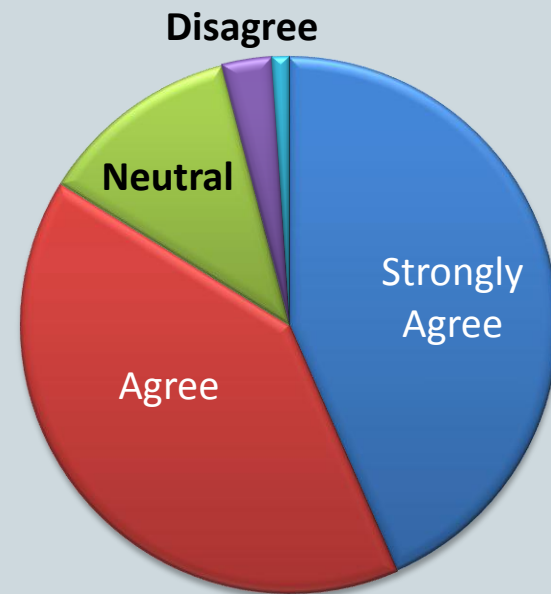
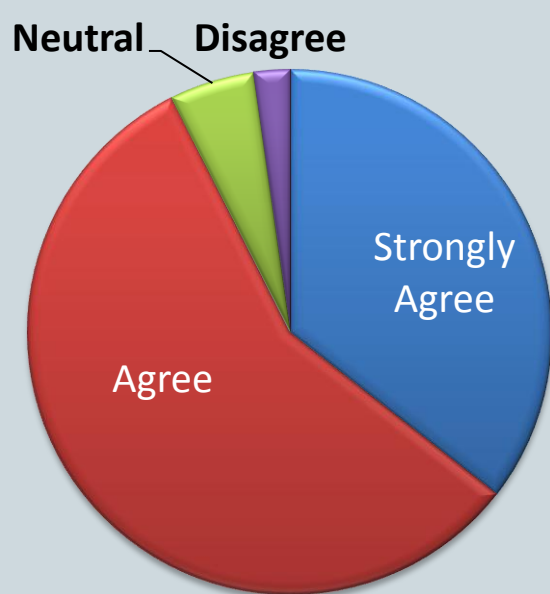


# Survey Evidence II

ECON20401 2012/13

ECON10042 2012/13

How much do you agree with the statement: “The voting system has enhanced my level of satisfaction with the programme”



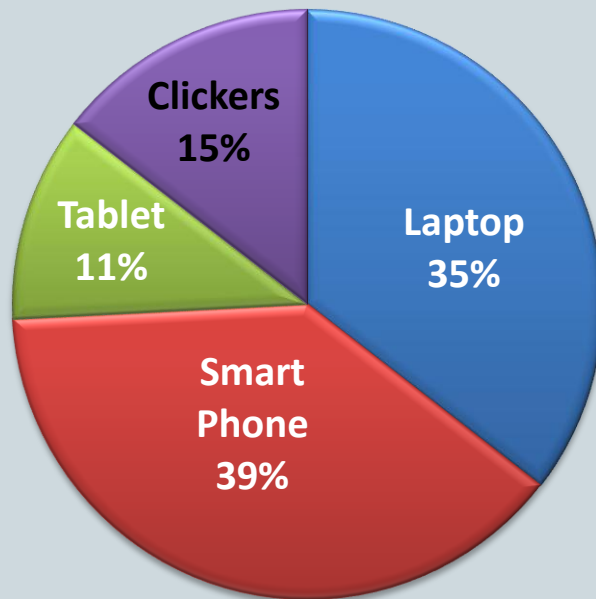
2012/13: “The voting system has enhanced my level of satisfaction with the programme.” (Agree/Disagree): ECON10042 (83% : 4%) ECON20401 (93% : 2%)



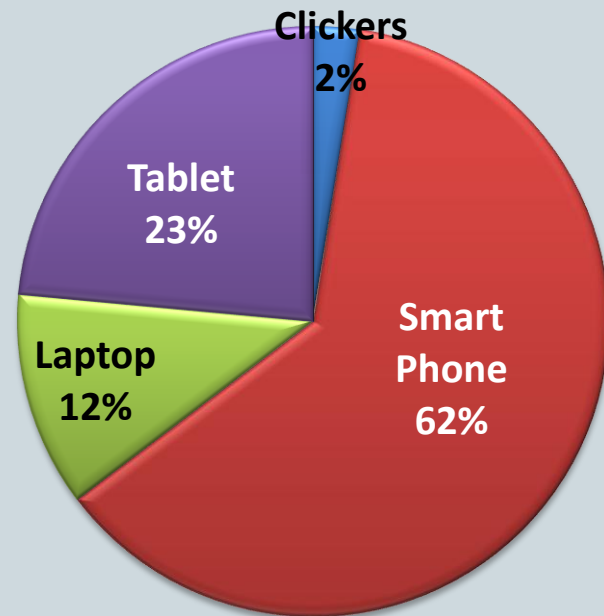
# Survey Evidence III – focus on devices

Which type of device did you use to participate?

ECON10042 2011/12



ECON10042 2012/13



# Best Practice....

- Survey your students to find out what devices they use.
- Encourage students to `partner' in the innovation.
- Use questions that stretch students or split opinion.
- Don't ask questions you don't want the answer to!



Finally, you can watch a video we produced with clicker practitioners at UoM:

*'What's the Use of Clickers?'*

<http://goo.gl/GgqM1>

# Next steps

Find out what services are available in your institution your eLearning technology services.

Feel free to contact me or Will if you are interested in adopting this technology into your teaching.

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